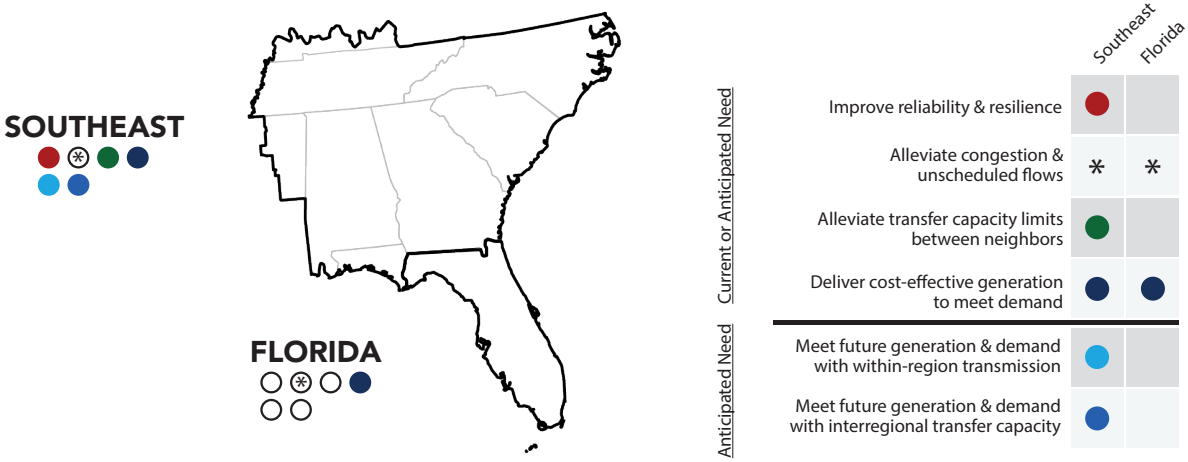
GRID DEPLOYMENT OFFICE

FACT SHEET

2023 NATIONAL TRANSMISSION NEEDS STUDY

SOUTHEAST AND FLORIDA

The U.S. Department of Energy's Grid Deployment Office (GDO) released the National Transmission Needs Study ("Needs Study") in October 2023. The Needs Study is the Department's **triennial state of the grid** report. The Needs Study identifies transmission needs and provides information about current and anticipated future capacity constraints and congestion on the Nation's electric transmission grid. In this fact sheet, we highlight the transmission needs of the Southeast and Florida. The Needs Study provides further detail on the benefits of transmission that could be realized throughout the country.



**Wholesale market price data is limited for non-RTO/ISO regions. Absence of data does not necessarily indicate that there is no need for transmission to alleviate congestion and/or unscheduled flows in non-RTO/ISO regions.*

FINDINGS OF TRANSMISSION NEED IN THE SOUTHEAST AND FLORIDA

Fewer transmission system data and references were available for the Southeast and Florida than for many other regions of the country. These findings are incomplete for these regions given this lack of historic information.

› **Improve reliability and resilience.** Extreme events in the Southeast can lead to generation shortages and blackouts, even when neighboring regions have excess generation. Increased transfer capacity between the Southeast and its neighbors would have helped Southeastern utilities service customer load during Winter Storm Elliott in 2022. Additional transmission infrastructure within the Southeast region would provide reliable electric service to some areas as generation retirements occur. Hurricanes pose a threat to both the Southeast and Florida, and the hardening of the existing system would increase resilience to these intensifying events.

› **Alleviate transfer capacity limits between the Southeast and its neighbors.** Increased transfer capacity between the Southeast and its neighbors would result in consumer savings. Transfer capacity limits between the Southeast and its neighbors during Winter Storm Elliot led to forgone savings estimated to total nearly $100 million.

› **Deliver cost-effective generation to meet demand.** Both market forces and public policy are driving rapid changes in generation and demand in the Southeast and Florida. Capacity expansion modeling suggests that transmission upgrades within the Southeast and between the Southeast and Florida will be necessary to deliver cost-effective generation to load under a variety of different transmission technology scenarios.

HELPFUL LINKS

› **Read the full study at www.energy.gov/gdo/national-transmission-needs-study**

› **Contact GDO with additional questions: transmission@hq.doe.gov**

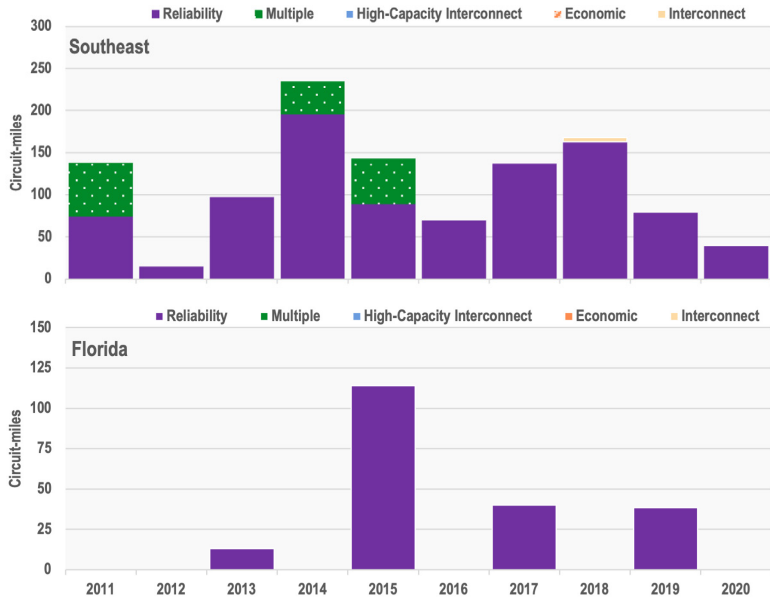
FINDINGS OF TRANSMISSION NEED IN THE SOUTHEAST AND FLORIDA (CONT.)

› **Meet future generation and demand with additional within-region transmission.** It is anticipated that the Southeast region will need between 5.4 and 8 TW-miles of within-region transmission in 2035 (median 6.8 TW-miles, a 77% increase relative to the 2020 system) to meet moderate load growth and high clean energy growth future scenarios. Median growth of anticipated within-region transmission need in Florida was less than 25% relative to the 2020 system in 2035 under the same future scenarios.

› **Meet future generation and demand with additional interregional transfer capacity.** It is anticipated that the Southeast region will need between 5.8 and 9.9 GW of additional transfer capacity with the Mid-Atlantic region in 2035 (median of 6.9 GW, a 97% increase relative to the 2020 system) to meet moderate load growth and high clean energy growth future scenarios. Smaller transfers between the Southeast region and the Delta (median value of 5.1 GW) and Midwest (median value of 4.5 GW) regions will also be required. Median growth of anticipated transfer capacity need between the Southeast and Florida was 32% relative to the 2020 system in 2035 under the same future scenarios.

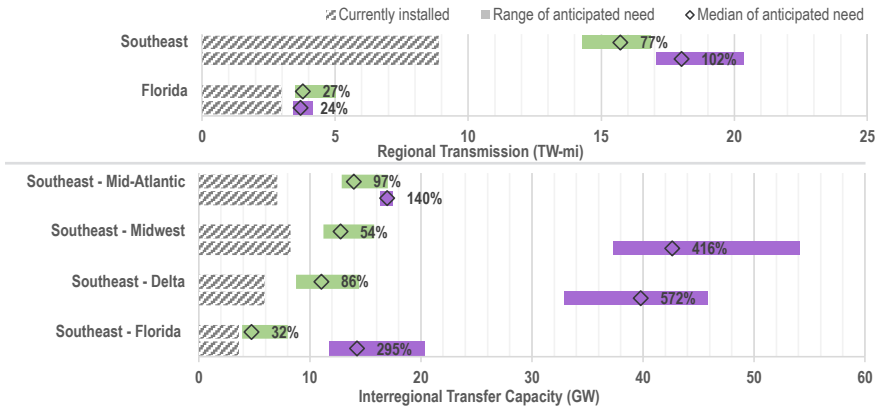
FINDINGS AT A GLANCE

Circuit-miles of new or rebuilt transmission lines (≥100kV) energized between 2011–2020 by project driver.



Projects energized from 2011-2020 in Southeast and Florida were almost exclusively installed to **address reliability concerns**. Less than half of projects installed in the Southeast prior to 2016 were to address **multiple drivers**.

Within-region transmission and interregional transfer capacity need for Southeast & Florida in 2035
Range of new transmission need for future scenarios with moderate load and high clean energy growth (green, top for each region) and high load and high clean energy growth (purple, bottom). Median % growth compared to 2020 system shown.



Capacity expansion modeling results for the Moderate/High scenario group suggest an anticipated need of **6.8 TW-miles of new within-region transmission in the Southeast** (77% growth relative to 2020) and **0.8 TW-miles in Florida by 2035** (27% growth relative to 2020). **Significant new interregional transfer capacity growth is needed between the Southeast and its neighbors by 2035**.

Median 2035 capacity expansion modeling results for Moderate/High scenario group.

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